The Tidal Freshwater Marsh community is distinguished by a relatively high species diversity and variable dominance patterns. In areas occupied by the Oligohaline Variant, tall herbs, grasses, and sedges are dominant. These include softstem bulrush (*Schoenoplectus tabernaemontani*), shoreline sedge (*Carex hyalinolepis*), and narrowleaf cattail (*Typha angustifolia*), with giant cordgrass (*Spartina cynosuroides*) forming patches along the rivers and tidal channels. In areas occupied by the Freshwater Variant, wildflowers are dominant, including lanceleaf arrowhead (*Sagittaria lancifolia* var. *media*), arrow arum (*Peltandra virginica*), pickerelweed (*Pontederia cordata*), and eastern doll's-daisy (*Boltonia asteroides*).

Human settlement has had considerable impact on habitat at this site, beginning with rice plantations constructed shortly after 1720 (Hackney and Yelverton 1990). At that time, tidal cypress swamp was likely the dominant community at the site, with freshwater marsh habitat farther downstream. Since that time, tidal-borne saltwater has advanced farther upstream. There are two causes for this: rising sea level and river dredging. Rising sea level is a natural phenomenon that has been occurring since the last ice age. In recent history, the rate of sea level rise has been about 1 foot per century, but this rate may be accelerating due to increased melting of the polar ice caps. River dredging has also contributed to an increase in tide water volume. In the past century, rising sea level and dredging together have raised the vertical reach of high tide in Cape Fear River by nearly 2 feet. That has sent salt-laden tide water much farther upstream than before. The effects of this impact are most readily seen in the tributary creeks of the river, such as Barnards and Mott creeks, where dead stands of cypress trees are stark indicators of rapid change. In essence, this change in salinity and tidal amplitude has resulted in the "retreat" of natural communities upstream, or more accurately, the replacement of one community association by another at a given site; for example, the replacement of cypress swamp by marsh in the lower reaches of Barnards and Mott creeks. It is not known whether the components of the current natural community associations will be able to keep pace with the rate of these changes.

The Brunswick River/Cape Fear River Marsh natural area bears the marks of these changes. Large ditches in the marshes are left over from the rice plantation era. Both the ditches and remnant cypress stands are evidence that the habitat was once primarily tidal cypress swamp, since most rice plantations were created from swamp habitat. The site has also been impacted internally by smaller dredging and filling projects, roadbed construction (US 17-74-76), railroad construction, and powerline corridors. Common reed (*Phragmites australis*) potentially poses a major threat. This invasive grass has responded well to changes in river salinity and has advanced upstream. It has replaced large areas of diverse native marsh, allowing almost no other flowering plants to grow with it.

The tidal marshes and creeks of this site provide essential high quality habitat for a great number of vertebrate and invertebrate animals from alligator to fish, crab, and butterfly. Estuarine marshes are among the most biologically productive habitats in nature, providing breeding, nurturing, and basic life support habitat not only for estuarine species, but also for many animals that spend most of their life in the ocean. Aquatic habitat supports many species of waterbirds, fishes, and reptiles, including the Federally and State Endangered shortnose sturgeon and Federally and State Threatened American alligator.